

## Introduction

Problems with management of water resources have their roots in increase in population and uncoordinated/unplanned use of water resources in urban and rural areas. Ever increasing urbanisation results in increase in water demands and change in hydrological cycle in urban areas. Similarly, excessive use of water for irrigation in rural areas leads to depletion of groundwater. Problem further aggravated due to use of conventional irrigation technologies, which leads to wastage of water. Unhygienic sanitation practices and excessive use of chemical fertilizers leads to groundwater contamination. When such resources deplete or overexploited, and their quality gets deteriorated, the need for comprehensive management of water resources arises. Furthermore, drought events that often occur, like in many states of India amplify water management problems. However, proper monitoring, assessment and use of best water management practices can avoid such problems.

## Objective

Present course is conceived to discuss the water management related problems and best management practices/approaches available for sustainable utilization of available water resources.

## Contents

- Hydrological Aspects
  - Hydrological cycle in rural and urban areas
  - Assessment of available water resources
  - Rainfall-runoff processes,
  - Hydrological/ Hydraulic model parameterisation,
  - Water balance studies
  - Assessment of groundwater potential and safe yield
  - Use of spatial techniques for hydrological studies like, rainfall runoff modelling, rainfall recharge estimation, groundwater modelling,
- Water Demand Forecasting
  - Uses of water
  - Factors affecting population and water demand
  - Methods and approaches available for estimation of water demands

- Urban Water Management Issues and Problems
  - Water management problems in urban areas
  - Water management problems in rural areas
  - Urban dynamics and water resources,
- Best Water Management Practices
  - Classification of water management techniques
  - Supply management practices
  - Water demand management practices
  - Water conservation methods
  - Wastewater reuse technologies
  - Optimum integration of various water management options
  - Public private partnership (Field Visits)
  - Extension of available technologies to the users

## Course Coordinator (s):

**Dr. Mahesh Kumar Jat \***

**Dr. Mahender Choudhary \***

\*Reader, Department of Civil Engineering  
&

**Dr. Sudhir Kumar**

Professor, Department of Civil Engineering  
Malaviya National Institute of Technology  
Jaipur –302017 (Rajasthan)

## Eligibility

Faculty members from academic Institutions (Engineering Colleges/ Universities/ Research organizations) in a grade of Lecturer and Higher. The program is designed for faculty members involved in teaching and R&D activities.

## Registration Fee

There is no registration fee for the eligible candidates. Traveling allowance (maximum 3<sup>rd</sup> AC Train fare) shall be provided to the eligible participants on production of travel tickets. Boarding and lodging arrangements would be made by the Institute.

**Department of Civil Engineering  
Malaviya National Institute of Technology  
Jaipur**

## REGISTRATION FORM

### Staff Development Programme

on

### Best Water Management Practices

(July 05 -18, 2008)

Name, Designation & Address of Applicant

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Phone (O & R) & Fax with STD Code .....

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E-mail: .....

Address of Sponsoring Authority .....

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Date:

Signature of Sponsoring Authority with seal      Signature of candidate

## Experts from

- IIT Delhi
- IIT Roorkee
- MNIT Jaipur
- Research Organisations
- Industry

## Important Deadlines

### Last date for receiving applications

July 2<sup>nd</sup>, 2008

### Notification about Selection

July 2<sup>nd</sup>, 2008

## About MNIT Jaipur

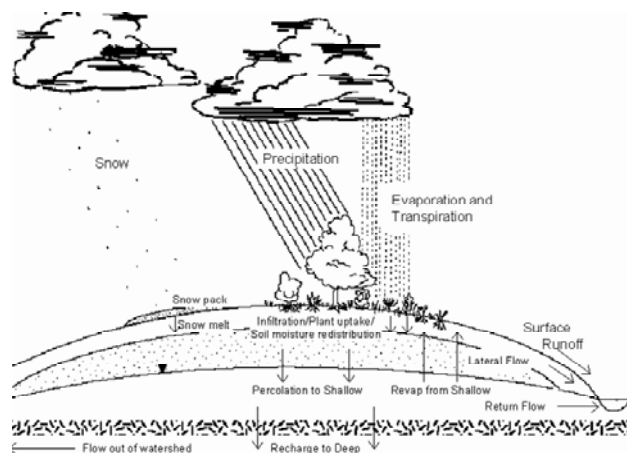
Malaviya National Institute of Technology Jaipur is one of the 20 NIT's established in Jaipur known as Pink City. Institute was established as a joint venture of the Government of India and the Government of Rajasthan in 1963. MNIT campus spreads over 325 acres of lush green area in the central location of Jaipur city.

At present the institute offers undergraduate and post graduate courses (M.Tech./M.Sc. & Ph.D) to about 2500 students in almost all leading fields of engineering, technology, management and sciences. Through the internationally renowned faculty, laboratories with state of art equipments and excellent infrastructure, the institute is actively engaged in research, consultancy and developmental activities besides imparting regular teaching.

## About Jaipur

Jaipur is well known as Pink city and capital of Rajasthan. It is a famous heritage city with numerous places of tourist's interest. Jaipur is well connected by road, rail and air services. It is about 250 km from Delhi. MNIT Jaipur is situated on Jawaharlal Lal Nehru Marg and is about 9 km from main railway station of Jaipur and about 8 km from Central Bus

Stand (Sindhi Camp). Airport (located at Sanganer) is about 5 km away from the institute.



(Hydrological Cycle)

## For all Correspondence

Interested person(s) should send the Nomination on the enclosed Pro-forma duly sponsored by the appropriate authority at the earliest to -

### Mahesh Kumar Jat

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Malaviya National Institute of Technology  
Jaipur – 302017  
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E-mail : [sklamoria@yahoo.com](mailto:sklamoria@yahoo.com)

**Brochure is available on institute web site**

<http://www.mnit.ac.in>

## Malaviya National Institute of Technology Jaipur

### ANNOUNCES

### Staff Development Programme

on

## Best Water Management Practices

(July 05 -18, 2008)



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Department of Civil Engineering  
M N I T Jaipur – 302017

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